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SOLOMON, LISA				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,781

Applicant(s)

TEMPLE, STEPHEN

Examiner

LISA M. SOLOMON

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 5,7,9,10,16-18,20,21,26-59 and 61-69 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-4,6,8,11-15,19,23-25,55,60 and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 19, 2008 has been entered.

Election/Restrictions

2. Newly submitted claim 69 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The inventions listed as Groups I (see previous election), II (see previous election), III (see previous election), IV (see previous restriction), and V (claim 69) do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The groups listed above are not within the permitted combination of different categories of invention. That is two apparatuses and two different processes. As set forth in the international search report submitted on July 2, 2004, the "X" references US 5469199, EP 0914950, US 6322206, EP 0726151, and US 5841452 read on the claims. Therefore, there is no special technical feature.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for

prosecution on the merits. Accordingly, claim 69 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 19, 23-24, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara et al. (20020018097) in view of Matsumoto et al. (20020008731).

In regards to claim 1, *Kitahara et al.* (20020018097) teaches a droplet deposition apparatus (10, Fig. 1) for depositing droplets on a substrate (28, Fig. 2) and comprising an elongate printhead (3, Fig. 4), the substrate (28) being movable relative to the printhead (3) in a substrate movement direction (D0, Fig. 3) and the printhead (3) extending in a printhead direction (E0, Fig. 3)) orthogonal to the substrate movement direction (D0) and having a length over which it extends in said printhead direction (E0) and a width over which it extends in said substrate movement direction (D0) [Paragraph 75 lines 1-2; 6-8, Paragraph 77, See also Fig. 4], wherein the printhead (3) comprises at least two print head units ((35a-35d) – (38a-38d), Fig. 4) spaced in the printhead direction (E0), each print head unit ((35a-35d) – (38a-38d), Fig. 4) comprising at least two parallel rows of nozzles (35a1a, 35a1b, etc., Fig. 5) extending in the printhead direction (E0) with the rows being spaced apart in the substrate movement direction

(D0) [Paragraph 93 lines 1-5, See also Fig. 5]; an actuator for effecting the selective ejection of droplets from respective nozzles 35a1a, 35a1b, etc) and a droplet fluid supply arrangement disposed such that a different fluid may be supplied to each row of nozzles (35a1a, 35a1b, etc) [Paragraph 82 lines 6-7 and Paragraph 87-90], wherein said units ((35a-35d) – (38a-38d)) are arranged such that a nozzle row of one unit combines with a nozzle row from a different unit to form an array wherein the nozzles (35a1a, 35a1b, etc) within an array are supplied with the same ejection fluid and wherein the gap spacing between the end nozzle of one row in an array and the neighboring end nozzle of a different row in said array is greater than the inter-nozzle spacing within either of the rows [Paragraphs 87-90, 93-97, and 109-110]. However, Kitahara et al. (20020018097) does not teach further wherein said length of said printhead is greater than said width of said printhead.

Matsumoto et al. (20020008731) also teaches an elongate printhead extending in a printhead direction (i.e. a direction along one line as shown in Fig. 5) orthogonal to the substrate movement direction (i.e. a direction that is opposite to the direction in which printhead units in the printhead are arranged in Fig. 5) having a length over which it extends in said printhead direction and a width over which it extends in said substrate movement direction [Paragraphs 49-50 and 76-77, See also Fig. 5] and further teaches wherein said length of said printhead is greater than said width of said printhead [See Fig. 5].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wherein said length of said printhead is greater than said

width of said printhead as taught by Matsumoto et al. (20020008731) in the droplet deposition apparatus of Kitahara et al. (20020018097) for the purposes of providing a printhead capable of one image line on a recording medium corresponding to the length of one side of the recording medium [Matsumoto et al. (20020008731) Paragraph 49].

In regards to claim 2, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above]. However, *Kitahara et al. (20020018097)* does not teach each printhead unit comprises at least three rows of nozzles, with each row of nozzles receiving from the supply arrangement a different color of ink.

Matsumoto et al. (20020008731) teaches each printhead unit comprises at least three rows of nozzles, with each row of nozzles receiving from the supply arrangement a different color of ink [Paragraphs 77-78, See also Fig. 5].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide each printhead unit comprises at least three rows of nozzles, with each row of nozzles receiving from the supply arrangement a different color of ink as taught by Matsumoto et al. (20020008731) in the apparatus of Kitahara et al. (20020018097) for the purposes of recording a multicolor image [Matsumoto et al. (20020008731) Paragraph 77 lines 6-8].

In regards to claim 3, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above].

Kitahara et al. (2002018097) further teaches wherein each nozzle (35a1a, 35a1b, etc) in one row of nozzles (35a1a, 35a1b, etc) is aligned in position in the printhead direction (E0) with a nozzle (35a1a, 35a1b, etc) in each of the other rows of nozzles [See Fig. 5].

In regards to claim 4, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above].

Kitahara et al. (2002018097) further teaches the apparatus according to claim 1, wherein each row of nozzles has the same length [See Fig. 5].

In regards to claim 19, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above].

Kitahara et al. (2002018097) further teaches the apparatus according to claim 1, wherein said array is linear [See Fig. 5].

In regards to claims 23-24, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above].

Kitahara et al. (20020018097) further teaches the apparatus according to claim 1 further comprising a transporter (2, Figs. 1 and 3) for supplying a printable substrate (28) to a print zone disposed to receive droplets ejected from said nozzles (35a1a, 35a1b, etc) and wherein a paper transporter (2) supplies said printable substrate (28) to said print zone in said substrate movement direction [Paragraph 75 lines 6-8, Paragraph 76 lines 1-4, and Paragraph 77].

In regards to claim 70, *Kitahara et al. (20020018097)* teaches a droplet deposition apparatus (10, Fig. 1) for depositing droplets on a substrate (28, Fig. 2) and comprising an elongate printhead (3, Fig. 4), the substrate (28) being movable relative to the printhead (3) in a substrate movement direction (D0, Fig. 3) and the length of the printhead (3) extending in a printhead direction (E0, Fig. 3)) orthogonal to the substrate movement direction (D0) [Paragraph 75 lines 1-2; 6-8, Paragraph 77, Fig. 4], wherein the printhead (3) comprises at least two print head units ((35a-35d) – (38a-38d), Fig. 4) spaced in the printhead direction (E0), each print head unit ((35a-35d) – (38a-38d), Fig. 4) comprising at least two parallel rows of nozzles (35a1a, 35a1b, etc., Fig. 5) extending in the printhead direction (E0) with the rows being spaced apart in the substrate movement direction (D0) [Paragraph 93 lines 1-5, See also Fig. 5]; an actuator for effecting the selective ejection of droplets from respective nozzles 35a1a,

35a1b, etc) and a droplet fluid supply arrangement disposed such that a different fluid may be supplied to each row of nozzles (35a1a, 35a1b, etc) [Paragraph 82 lines 6-7 and Paragraph 87-90], wherein said units ((35a-35d) – (38a-38d)) are arranged such that a nozzle row of one unit combines with a nozzle row from a different unit to form an array wherein the nozzles (35a1a, 35a1b, etc) within an array are supplied with the same ejection fluid and wherein the gap spacing between the end nozzle of one row in an array and the neighboring end nozzle of a different row in said array is greater than the inter-nozzle spacing within either of the rows [Paragraphs 87-90, 93-97, and 109-110]. However, Kitahara et al. (20020018097) does not teach further wherein the nozzles in an array are disposed on a single line parallel to said printhead direction.

Matsumoto et al. (20020008731) teaches wherein the nozzles in an array are disposed on a single line parallel to said printhead direction [See Fig. 5].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide wherein the nozzles in an array are disposed on a single line parallel to said printhead direction as taught by *Matsumoto et al. (20020008731)* in the droplet ejection apparatus of *Kitahara et al. (20020018097)* for the purposes of integrating rows of nozzles for each of the colors used for recording a multicolor image [*Matsumoto et al. (20020008731)* Paragraph 77].

Claims 6, 8, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kitahara et al. (20020018097)* in view of *Matsumoto et al. (20020008731)* as

applied to claims 1-4, 19, 23-24, and 70 above, and further in view of Hirota et al. (6,758,553).

In regards to claim 6, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection]. *Kitahara et al. (20020018097)* further teaches wherein the actuator for effecting the selective ejection of droplets from respective nozzles [Paragraph 82 lines 6-7 and Paragraph 87-90]. However, *Kitahara et al. (2002018097)* and *Matsumoto et al. (20020008731)* both do not teach the actuator comprises for each nozzle a pressure chamber in communication with the nozzle and in communication with the fluid supply arrangement.

Hirota et al. (553') teaches an actuator comprises for each nozzle a pressure chamber in communication with the nozzle and in communication with the fluid supply arrangement [Column 3 line 53-Column 4 line 6].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an actuator that comprises for each nozzle a pressure chamber in communication with the nozzle and in communication with the fluid supply arrangement as taught by *Hirota et al. (553')* in the apparatus of *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* for the purposes of providing a main body of the printhead [*Hirota et al. (553')* Column 3 lines 26-27].

In regards to claim 8, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731)* and *Hirota et al. (553')* teaches the apparatus

according to claim 6 [see rejection above]. However, Kitahara et al. (2002018097) and Matsumoto et al. (20020008731) both do not teach wherein said pressure chambers comprise at least one wall of piezoelectric material.

Hirota et al. (553') further teaches wherein said pressure chambers comprise at least one wall of piezoelectric material [Column 4 lines 53-65, See also the upper wall on Fig. 3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide said pressure chambers comprise at least one wall of piezoelectric material as taught by *Hirota et al. (553')* in the apparatus of *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* for the purposes of providing a compact printhead [*Hirota et al. (2002018097)* Column 1 lines 60-64].

In regards to claim 11, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* and *Hirota et al. (553')* teaches the apparatus according to claim 6 [see rejection above]. However, *Kitahara et al. (2002018097)* and *Matsumoto et al. (20020008731)* both do not teach wherein the pressure chambers corresponding with one row of nozzles are provided in a row of pressure chambers on a base, with the pressure chambers corresponding with each other row of nozzles being provided in a respective other row of pressure chambers on the same base.

Hirota et al. (553') further teaches wherein the pressure chambers corresponding with one row of nozzles are provided in a row of pressure chambers on a base, with the pressure chambers corresponding with each other row of nozzles being provided in a

respective other row of pressure chambers on the same base [Column 3 lines 31-43, Column 4 lines 53-65, See also Figs. 2 and 3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the pressure chambers corresponding with one row of nozzles are provided in a row of pressure chambers on a base, with the pressure chambers corresponding with each other row of nozzles being provided in a respective other row of pressure chambers on the same base as taught by Hirota et al. (553') in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the purposes of causing the volume in the pressure chambers to increase upon deformation of the actuators to eject ink from the nozzle [Hirota et al. (553') Column 5 lines 18-23].

In regards to claim 12, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) and Hirota et al. (553')* teaches apparatus according to claim 11 [see rejection above]. However, Kitahara et al. (2002018097) and Matsumoto et al. (20020008731) both do not teach wherein there are provided on the base, a divider to define around each row of chambers a fluid manifold region for use in the supply of fluid to the chambers of that row, the respective manifold regions being separate from each other.

Hirota et al. (553') teaches wherein there are provided on the base, a divider to define around each row of chambers a fluid manifold region for use in the supply of fluid

to the chambers of that row, the respective manifold regions being separate from each other [Column 5 lines 6-22, See also Fig. 7].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a base, a divider to define around each row of chambers a fluid manifold region for use in the supply of fluid to the chambers of that row, the respective manifold regions being separate from each other as taught by Hirota et al. (553') in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the purposes of supplying ink to the pressure chambers [Hirota et al. (553') Column 5 lines 8-18].

In regards to claim 13, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) and Hirota et al. (553')* teaches apparatus according to claim 12 [see rejection above]. However, Kitahara et al. (2002018097) and Matsumoto et al. (20020008731) both do not teach wherein ports are defined in the base for communication with each fluid manifold region.

Hirota et al. (553') teaches wherein ports are defined in the base for communication with each fluid manifold region [Column 5 lines 15-23, See also Fig. 2].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide ports that are defined in the base for communication with each fluid manifold region as taught by Hirota et al. (553') in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the

purposes of providing conduits through which ink is supplied to the pressure chambers [Hirota et al. (553') Column 5 lines 8-14].

In regards to claim 14, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) and Hirota et al. (553')* teaches apparatus according to claim 13 [see rejection above]. However, Kitahara et al. (2002018097) and Matsumoto et al. (20020008731) both do not teach wherein at least two ports communicate with each manifold region to prove a flow through each chamber.

Hirota et al. (553') teaches wherein at least two ports communicate with each manifold region to proved a flow through each chamber [Column 5 lines 15-23, See also Fig. 2].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide at least two ports communicate with each manifold region to proved a flow through each chamber as taught by Hirota et al. (553') in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the purposes of providing conduits through which ink is supplied to the pressure chambers [Hirota et al. (553') Column 5 lines 8-14].

In regards to claim 15, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) and Hirota et al. (553')* teaches apparatus according to

claim 11 [see rejection above]. However, Kitahara et al. (2002018097) and Matsumoto et al. (20020008731) both do not teach wherein the base is planar and the divider comprises an apertured divider plate with said apertures defining the respective manifold regions.

Hirota et al. (553') teaches wherein the base is planar and the divider comprises an apertured divider plate with said apertures defining the respective manifold regions [Column 3 lines 31-42, Column 4 lines 23-31, See Fig. 2].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base to be planar and the divider comprises an apertured divider plate with said apertures defining the respective manifold regions as taught by Hirota et al. (553') in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the purposes of providing a narrow channel for ink to be supplied to the pressure chambers [Hirota et al. (553') Column 5 lines 14-18].

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara et al. (20020018097) in view of Matsumoto et al. (20020008731) as applied to claims 1-4, 19, 23-24, and 70 above, and further in view of Mizusawa et al. (4,677,448).

In regards to claim 25, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731)* teaches the apparatus according to claim 23 [see rejection above]. However, Kitahara et al. (20020018097) and Matsumoto et al.

(20020008731) both do not teach said paper transporter comprises a paper-handling drum.

Mizusawa et al. (448') teaches a paper transporter comprises a paper-handling drum [Column 5 line 61-Column 6 line 13].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a paper transporter comprises a paper-handling drum as taught by *Mizusawa et al. (448')* in the apparatus of *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* for the purposes of providing means to transport a recording paper [*Mizusawa et al. (448')* see Fig. 5].

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kitahara et al. (20020018097)* in view of *Matsumoto et al. (20020008731)* as applied to claims 1-4, 19, 23-24, and 70 above, and further in view of *Yabe (20020041307)*.

In regards to claim 55, *Kitahara et al. (20020018097)* in combination with *Matsumoto et al. (20020008731)* teaches the apparatus according to claim 1 [see rejection above]. However, *Kitahara et al. (20020018097)* and *Matsumoto et al. (20020008731)* both do not teach wherein said head units are mounted to an ink supply unit.

Yabe (20020041307) teaches wherein said head units are mounted to an ink supply unit [Paragraph 71].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide said head units are mounted to an ink supply unit as

taught by Yabe (20020041307) in the apparatus of Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) for the purposes of completing the printhead [Yabe (20020041307) Paragraph 71 lines 1-2].

Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara et al. (20020018097) in view of Matsumoto et al. (20020008731) and Yabe (20020041307) as applied to claim 55 above, and further in view of Silverbrook (20020024569).

In regards to claim 55, *Kitahara et al. (20020018097) in combination with Matsumoto et al. (20020008731) and Yabe (20020041307)* teaches the apparatus according to claim 55 [see rejection above]. However, Kitahara et al. (20020018097), Matsumoto et al. (20020008731), and both Yabe (20020041307) do not teach wherein said ink supply unit comprises a plurality of supply cavities each communicating with a respective array.

Silverbrook (20020024569) teaches wherein said ink supply unit comprises a plurality of supply cavities each communicating with a respective array [Abstract, Paragraphs 7, 9, and 283, See also Figs. 96-97].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide said ink supply unit comprises a plurality of supply cavities each communicating with a respective array taught by Silverbrook (20020024569) in the apparatus of Kitahara et al. (20020018097) in combination with

Matsumoto et al. (20020008731) and Yabe (20020041307) for the purposes of holding separate color inks [Silverbrook (20020024569) Paragraph 9 lines 5-6].

Allowable Subject Matter

5. Claim 22 has been allowed.

The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the allowance of claim 22 is the inclusion of limitation of the droplet deposition apparatus that includes "said gap spacing equals the row length plus twice the inter-nozzle spacing". It is this limitation found in the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Response to Arguments

6. Applicant's arguments filed June 19, 2008 have been fully considered but they are not persuasive.

In response to the Applicant's request to provide the different meanings of the Examiner considers the term "orthogonal", the Examiner simply desired to express that a direction could be seen as "orthogonal" from a certain viewpoint, such as from a top view or bottom view or seen as "orthogonal" as it extends upward or downward.

In response to the Applicant's argument concerning the representation of printer head (3) in Fig. 1 of the prior art Kitahara, the Examiner would like to point out that the printer head (3) in Fig. 1 was by no means meant to represent the finite dimensions of the printer head (3) rather it was meant to generally show that a length in the printhead direction (E0) is orthogonal to the transportation direction/substrate movement direction.

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LISA M. SOLOMON whose telephone number is (571)272-1701. The examiner can normally be reached on Monday - Friday from 8:00 am - 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LUU MATTHEW/
Supervisory Patent Examiner, Art Unit 2861

Lisa M Solomon
Examiner
Art Unit 2861

/L. M. S./

Application/Control Number: 10/500,781

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